

a plurality of groups of the position sensing devices, each group being composed of a plurality of sensing devices and each group being electronically segmented and each group being located at a selected, respective position on the substrate;

an electronic logic circuit coupled to each of the groups for sensing whether a human appendage has been placed adjacent the respective group.

2. (Amended) The apparatus according to claim 1 wherein the plurality of groups includes at least 3 groups.

4. (Amended) The apparatus according to claim 2 wherein the groups are positioned with a first group surrounding a second group and the second group surrounding a third group.

11. (Amended) The apparatus according to claim 10, further including:
a fingerprint identification circuit coupled to the semiconductor substrate for sensing the identity of the a fingerprint placed thereon.

12. (Amended) The apparatus according to claim 11 wherein the fingerprint identification circuit includes:

a memory for storing a plurality of reference fingerprint patterns;
a comparison circuit for comparing a pattern of a fingerprint placed on the substrate with a reference fingerprint pattern stored in the memory; and
an output circuit that outputs a signal indicating a match between an input fingerprint pattern and the reference fingerprint pattern stored in the memory.

13. (Amended) The apparatus according to claim 12, further including an enable circuit coupled to the output circuit for enabling the transmitter to transmit selected commands only after a fingerprint input pattern has matched a reference fingerprint pattern.

14. (Amended) The apparatus according to claim 10, further including:
an automobile;
a receiver circuit coupled to the automobile for receiving input from the transmitter.

15. (Amended) A method of sensing input from a finger of a user comprising:
sensing a first touch location on a substrate at a first time;
sensing a second touch location spaced from the first touch location on the substrate at a second time, after the first time;
comparing an input location sequence of the first and second touch locations to a set of reference location sequences stored in a memory;
outputting a signal indicating a match between the input location sequence and the reference location sequence;
performing a pre-programmed function based the signal of the match.

16. (Amended) The method according to claim 15, further including:
receiving a sample fingerprint pattern on the substrate;
comparing the sample fingerprint pattern to a plurality of stored reference fingerprint patterns;
outputting a signal indicating a match between the sample fingerprint pattern and the stored reference fingerprint pattern; and
performing the pre-programmed function only after the match has been found between the sample fingerprint pattern and the reference fingerprint pattern.

17. (Amended) The method according to claim 15, further including:
receiving a sample fingerprint pattern on the substrate;
comparing the sample fingerprint pattern to a plurality of stored reference fingerprint patterns;
outputting a signal indicating whether or not there is a match between the sample fingerprint pattern and the stored reference fingerprint pattern; and

permitting the performing of selected pre-programmed functions before the match has been found between the sample fingerprint pattern and the reference fingerprint pattern.

20. (Amended) The method according to claim 19 wherein the function of locking the doors is permitted to be performed before the match is found.

22. (Amended) The method according to claim 15, further including:
sensing if a first touch occurred in a bottom portion of the substrate; and
sensing if a last touch occurred in a top portion of the substrate.

Please add new claims 24-31 to read as follows:

24. A method comprising:
receiving a fingerprint pattern at a substrate;
sensing the fingerprint pattern with a plurality of sensor cells;
comparing the sensed fingerprint pattern to plurality of stored patterns to determine if there is a match between the received fingerprint pattern and a stored fingerprint pattern;

receiving a command input to the same substrate after the fingerprint pattern has been received;

sensing the command input with at least some of the same sensor cells used to sense the fingerprint pattern; and

sending a signal to carry out the command input only if the previously received fingerprint pattern is a match with a stored fingerprint pattern.

25. The method according to claim 24 in which a first command signal is output if the received command is in a first location on the substrate and a second command signal is output if the received command is in a second location on the substrate.

26. A method of performing user identification and receiving command inputs of a plurality of commands using the same substrate comprising:

placing sensors on a substrate in a first mode of operation for recognition of a fingerprint pattern;

receiving a fingerprint pattern on the substrate;

comparing the fingerprint pattern to a plurality of stored patterns to determine if there is match with a stored pattern;

switching to a second mode of operation if there is match to a stored fingerprint pattern to permit a user to input commands using the same substrate; and

receiving a plurality of commands to carry out a plurality of respective functions using the same sensors on the same substrate as used for the fingerprint pattern recognition.

27. The method according to claim 26 in which the first mode of operation is a recognition mode and the second mode of operation is a command input mode.

28. An apparatus comprising:

a substrate having a plurality sensor elements thereon;

means for configuring the sensor elements to output a signal representative a fingerprint pattern;

means for recognizing whether the fingerprint pattern matches a stored fingerprint pattern;

means for outputting a recognition signal if an input fingerprint pattern matches a stored pattern;

means for receiving a plurality of command inputs at the same substrate after the change mode signal has been output, the command inputs being received using the same sensor elements that were used to perform the fingerprint recognition; and

means for sending out a command signal to carry out a received command the sending means being operational only after an input fingerprint patter has been found to match a stored fingerprint pattern.